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Patent US (610)  
Attorney Docket: 612,406-021 4 2003  
[formerly Docket: 271/144]  
TECH CENTER 1600/2900

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of the Claims

1-28. (Cancelled)

29. (Currently Amended) A supramolecular nanosystem comprising:

a first pentopyranose oligomer ~~comprising pentopyranose monomers~~;

a second pentopyranose oligomer ~~comprising pentopyranose monomers~~, wherein the second pentopyranose oligomer is capable of pairing non-covalently with the first pentopyranose oligomer; and

a functional unit coupled to the second oligomer, wherein the functional unit is selected from the group consisting of amino acids, peptides, fluorophores having an amine, chromophores having an amine, metals, redox centers, and chelating agents.

30. (Withdrawn)

31. (Previously Added) The supramolecular nanosystem of claim 29, wherein the functional unit is coupled directly to a pentopyranose monomer of the second oligomer.

32-42. (Withdrawn)

43. (Previously Added) The supramolecular nanosystem of claim 29, wherein the pentopyranose monomers are selected from the group consisting of a ribose, arabinose, lyxose, and xylose.

44-45. (Withdrawn)

46. (Previously Added) The supramolecular nanosystem of claim 29, wherein the first oligomer is longer than the second oligomer.

47. (Previously Added) The supramolecular nanosystem of claim 29, wherein the length of the first oligomer is between about 10 and 500 monomer units.

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48. (Previously Added) The supramolecular nanosystem of claim 29, wherein the length of the first oligomer is between about 10 and 100 monomer units.

49. (Previously Added) The supramolecular nanosystem of claim 29, wherein the length of the second oligomer is between about 4 and 50 monomer units.

50. (Previously Added) The supramolecular nanosystem of claim 29, wherein the length of the second oligomer is between about 4 and 25 monomer units.

51. (Previously Added) The supramolecular nanosystem of claim 29, wherein the length of the second oligomer is between about 4 and 15 monomer units.

52. (Previously Added) The supramolecular nanosystem of claim 29, wherein the length of the second oligomer is between about 4 and 8 monomer units.

53-59. (Withdrawn)

60. (Previously Added) The supramolecular nanosystem of claim 29, wherein the functional unit is a chelating agent, and wherein the chelating agent is coupled directly to the pentopyranose monomer of the second oligomer.

61. (Previously Added) The supramolecular nanosystem of claim 29, wherein the pentopyranose monomers are connected by a linkage selected from the group consisting of thiophosphate, alkylated phosphate, phosphonate, and amide.

62. (Withdrawn)

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